In the Claims

Kindly amend the claims as follows:

1. (currently amended) A monitoring system for the detection of obstacles and persons comprising at least one video camera and an escalator, characterized in that the monitoring system includes a model based staircase pose estimator based upon grouping of line features by the use of geometric invariants; acquires stereoscopic images; and determines differences in a rectified stereo image pair which are segmented into an escalator background and an obstacles and persons foreground by measuring pixel differences between unwarped and warped images wherein image differences are represented in an image pyramid and segmented into a staircase background and an obstacle foreground.

2. (previously presented) The monitoring system according to claim 1, characterized in that the video cameras are located above the escalator.

3. (previously presented) The monitoring system according to claim 1, characterized in that the video cameras are located in a balustrade of the escalator.

4. (previously presented) The monitoring system according to claims 1, 2 or 3, characterized in that more than one pair of video cameras are arranged along the escalator to monitor a full length of the escalator.

5. (previously presented) The monitoring system according to claim 1, 2 or 3, characterized in that, the monitoring system further comprises a processing unit for processing the stereoscopic images.

6. (previously presented) The monitoring system according to claim 5, characterized in that, the monitoring system further comprises a data exchange bus for linking the video cameras with the processing unit, and a means for storing the stereoscopic images.

7. (cancelled)

8. (original) The monitoring system according to claim 5, characterized in that, the processing unit is integrated with at least one camera.

9. (previously presented) The monitoring system according to claim 5, characterized in that, the monitoring system is connected electrically to a control for restarting the escalator after a stop only when no obstacle or person is detected on the escalator and/or moving walk.

10. (currently amended) A computer program product stored in a processor for the detection of obstacles and persons on escalators, characterized in that the computer program product and processor employs a model based staircase pose estimator based upon grouping of line features by the use of geometric invariants, and processes stereoscopic images of the escalator and determines differences in a rectified stereo image pair, which are segmented into an escalator background and an obstacles and persons foreground by measuring pixel differences between unwarped and warped images wherein image differences are represented in an image pyramid.

11. (previously presented) The computer program product according to claim 10, characterized in that the computer program product includes means to restart the escalator after a stop only when no obstacle ~~and/~~or person is detected on the escalator.

12. (currently amended) A method for the detection of obstacles and persons on escalators and/or moving walks, comprising the steps of employing a model based staircase pose estimator based upon grouping of line features by the use of geometric invariants, acquiring stereoscopic images of an escalator and/or moving walk by at least one video camera, processing the images with a processing unit, determining differences in a rectified stereo image pair to detect an obstacle or person in the images, and segmenting the differences into an escalator background and an obstacles and persons foreground by measuring pixel differences between unwarped and warped images wherein image differences are represented in an image pyramid.

13. (previously presented) The method according to claim 12, further comprising the steps of restarting the escalator automatically after a stop only when no obstacle or person is detected on the escalator.